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SCHOOLS AND LIBRARIES^{2, 3}**Eligibility List**

SERVICE	ELEMENT/ DESCRIPTION	ELIGIBLE YES/NO	PARAGRAPH CITE
TELECOMMUNICATIONS SERVICES			
<p>The primary purpose of the services for which support is sought must be the delivery of services to the classrooms or other places of instruction at schools and libraries that meet the statutory definition of an eligible institution. Support for the administrative functions of library or education programs is permitted so long as the services are part of the network of shared services for learning. Support will be limited to services delivered to the onsite educational facility or facilities.⁴</p> <p>The Paragraph Cite column represents the paragraph from FCC 97-157, FCC 97-420, Appendix or the FCC Public Notice "Updated Frequently Asked Questions on Universal Service and the Snowe-Rockefeller-Exon-Kerrey Amendment" that is most closely associated with the particular service. The information in the column is not intended to be all inclusive and other references should be considered.</p> <p>To be eligible for support, Telecommunications Services must be provided by an eligible Telecommunications Service provider, that is, one who provides Telecommunications Service on a common carriage basis. A provider/carrier is providing services on a common carriage basis if it holds itself out to provide service generally to the public for a fee. A State commission may upon its own motion or upon request designate a common carrier that meets the requirements as set forth in the Communications Act of 1934, Section 214 {47 U.S.C. 241} (e) (2) Designation of Eligible Telecommunications Carriers.</p>			

Items in **Bold** indicate an addition or modification of a product or service.

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¹ Federal-State Joint Board on Universal Service, CC Docket No. 96-45 Report and Order, 12 FCC Rcd 8776 (1997).
ERRATA released 6/04/97 and 12/24/97.

² Eligible schools and libraries should receive discounts of between 20 and 90 percent on all Telecommunications services, Internet access and internal connections provided by Telecommunications carriers.

³ Eligible schools and libraries will be permitted to apply their relevant discounts to information services provided by entities that consist of:

- (i) the transmission of information as a common carrier;
- (ii) the transmission of information as part of a gateway to an information service, where that transmission does not involve the generation or alteration of the content of information but may include data transmission, address translation, protocol conversion, billing management, introductory information content, and navigational systems that enable users to access information services that do not affect the presentation of such information services to users; and
- (iii) electronic mail services [e-mail].

⁴ Formal position statement adopted by the Schools and Libraries Corporation Board of Directors on November 20, 1997.

Public Address P.A. System	A system that allows the user to make announcements through the use of amplifiers and speakers. Typically, access is provided through a telephone system either manually or automatically by dialing a preassigned number.	No	459 460
Raceway	Raceway, which is a metal or plastic channel used for holding electrical or telephone wire is conditionally eligible for discounts. Raceway located inside an eligible entity's building (school or library) as well as raceway between eligible buildings located on a single campus (not crossing a public right of way) is eligible for discounts. Raceway used for electrical wiring or for Wide Area Network is not eligible for discount.	Conditional	459 460
Rack Mounted Power Strips	Rack mounted power strips are incidental to equipment racks installed to house eligible equipment. Equipment racks are an eligible component of Internal Connections. Power strips are considered eligible only if they are a bundled component part of an eligible service or product.	Conditional	459 460
RAID	Short for Redundant Array of Independent Disks, RAID is a category of disk that employs two or more drives in combination for fault tolerance and performance. RAID disk drives are eligible only if used in an eligible component.	Conditional	459 460
Relay I/O Module	Uninterruptable Power Supply module that integrates full UPS control into dry contact environments such as PBX's.	Yes	459 460
Remote Access Router	A router on a LAN with a digital DSU/CSU built in for dial up or remote access of a network.	No	459 460
Remote Access Server	Multi Protocol remote access server for dial-in, dial-out and LAN to LAN connections over both analog and digital phone lines. This Server provides flexible TCP/IP address assignment schemes for dial-in users and does not limit its use to those meeting the definition of an eligible Internal Connection.	No	459 460
Routers	Routers are switching devices that can act as an interface between two networks and connect different segments such as departments, or floors in a building. Functionally, routers select the routing path for traffic, may provide network management capabilities, such as load balancing and provide trouble shooting diagnostic capabilities.	Yes	460

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Documentation

[HOME](#) [CONTENTS](#) [PREVIOUS](#) [NEXT](#) [GLOSSARY](#) [FEEDBACK](#) [SEARCH](#) [HELP](#)

Table of Contents



Cisco 2500 Series - Fixed and Modular Access Routers

[Product Overview](#)[Key Features and Benefits](#)[Specifications](#)[Hardware](#)[Options](#)[Memory Options](#)[Hardware Product Numbers](#)[Single LAN Routers](#)[Mission-Critical Routers](#)[Router Hub Combinations](#)[Access Servers](#)[Dual LAN Routers](#)[Modular Routers](#)[Software](#)[Ordering Information](#)[Product and Part Numbers](#)

Cisco 2500 Series - Fixed and Modular Access Routers

Product Overview

The Cisco 2500 series routers provide a variety of models designed for branch office and remote site environments. These routers are typically fixed configuration with at least two of the following interfaces:

- Ethernet (AUI)
- 10BaseT Ethernet hub
- Token Ring
- Synchronous serial
- Asynchronous serial
- ISDN BRI

Key Features and Benefits

Cisco 2500 routers come with Flash EPROM technology for simplified software maintenance. These systems support a variety of Cisco IOS software feature sets, so you can choose a feature set that supports your specific protocol environment. The software feature sets range from an IP and bridging-only to the full array of Cisco's software functionality, including APPN and RMON.

Mission-specific models contain less memory and less hardware functionality to support a subset of protocols. Each mission-specific model can be upgraded to full router capability by downloading a new Cisco IOS software feature set and, if necessary, adding memory.

Cisco 2500 series models can be divided into the following categories:

- Single LAN routers - Models 2501, 2502, 2503, 2504, 2520, 2521, 2522 and 2523
- Mission-specific, entry-level routers - Models 2501CF, 2501LF, 2502CF, 2502LF, 2503I, 2504I, 2520CF, 2520LF, 2521CF, 2521LF, 2522CF, 2522LF, 2523CF and 2523LF
- Router/hub combinations - Models 2505, 2507 and 2516
- Access servers - Models 2509 to 2512 (refer to the "Cisco 2500 Series Access Servers" section in the "Access Servers" chapter in the catalog)
- Dual LAN routers - Models 2513, 2514 and 2515
- Modular routers - Models 2524 and 2525 (optional integrated DSU/CSU or NT-1)

Specifications

Hardware

All the Cisco 2500 series models support the features listed in the following table.

If your system requires more than 8 MB of Flash memory, the additional memory must be ordered separately.

This feature set is available with Cisco IOS Release 11.0 and later releases.

The console cable kit includes an RJ-45-to-RJ-45 roll-over console cable, an RJ-45-to-DB-25 male DCE adapter, an RJ-45-to-DB-25 female DTE adapter, and an RJ-45-to-DB-9 female DTE adapter

Table 15-118: Cisco 2500 Series Specifications

Characteristic	Description
Flash memory	Minimum of 8 MB of Flash memory, except for the mission-specific routers which require only 4 MB of Flash memory. However, depending on the Cisco IOS release that shipped with the system, it might require more memory. Refer to the "Cisco IOS Software" chapter for the minimum Flash memory required for each feature set.
DRAM memory expandability	Minimum DRAM required by the Cisco IOS release that shipped with the system. Refer to the "Cisco IOS Software" chapter for the minimum DRAM required for each feature set.
Processor type	20 MHz 68030
Software options -	IP Routing

Cisco IOS Release 11.2	<p>IP Routing Plus</p> <p>IP/IPX with IBM base functionality and APPN</p> <p>Desktop (IP/IPX/AppleTalk/DEC)</p> <p>Desktop (IP/IPX/AppleTalk/DEC) Plus</p> <p>Enterprise</p> <p>Enterprise Plus</p> <p>Enterprise/APPN/Plus</p> <p>Mission-specific Cisco 2500 series: application-specific software</p>
Software options - Cisco IOS Release 11.1 and 11.0	<p>IP Routing</p> <p>IP Routing with IBM base functionality</p> <p>IP/IPX Routing</p> <p>IP/IPX Routing with IBM base functionality</p> <p>IP/IPX with IBM base functionality and APPN</p> <p>Desktop</p> <p>Desktop with IBM base functionality</p> <p>Enterprise</p> <p>Enterprise/APPN</p> <p>RMON</p> <p>Mission-specific Cisco 2500 series: application-specific software</p>
Standard components	<p>Power supply and cord</p> <p>Console cable kit</p> <p>RJ-45-to-DB-9 adapter</p> <p>19 in. rack-mount/wall-mount kit</p>

Table 15-119: Cisco 2500 Series Environmental Specifications

Description	Cisco 2501
Consumption	For models 2501 to 2525: 40W
Input	For models 2501 to 2516 and 2520 to 2525: 110 to 220 VAC, 50 to 60 Hz -48 VDC
Current rating	For models 2501 to 2516 and 2520 to 2525: 1.0A at 60 Hz, 0.5A at 50 Hz
Operating temperature range	For models 2501 to 2516 and 2520 to 2525: 32 to 104°F (0 to 40°C)
Storage temperature range	For models 2501 to 2516 and 2520 to 2525: -40 to 185°F (-40to 85°C)
Humidity (noncondensing)	For models 2501 to 2525: 5 to 95%
Dimensions (H x W x D)	Models 2501 to 2516 and 2520 to 2525: 1.75 x 17.5 x 10.56 in. (4.44 x 44.45 x 26.82 cm)
Weight (average shipping)	Models 2501 to 2516 and 2520 to 2525: 10 lb. (4.5 kg)

Options

The Cisco 2500 series routers are discussed in the following sections:

- Memory Options
- Single LAN Routers
- Mission-Specific Routers
- Router/Hub Combinations
- Access Servers
- Dual LAN Routers
- Modular Routers
- Hardware Product Numbers

Memory Options

All Cisco 2500 models include a minimum of 8 MB of Flash memory, except for the mission-specific routers which include 4 MB or 8 MB of Flash memory, depending upon the Cisco IOS software release you order. Additional Flash memory can be purchased to allow for dual banking or potential future code growth.

There are two types of DRAM memory in the Cisco 2500 series routers: primary and shared (packet). Primary memory is used to store the operating configuration, routing tables, caches, and queues. Shared memory is used to store incoming and outgoing packets. In the table below, the physical configuration column lists the amount of DRAM SIMM memory supported. The system usage column lists how the system allocates the total DRAM memory installed.

Table 15-120: Shared and Primary DRAM Memory - Cisco 2500 Series

Total DRAM Memory	Physical Configuration	System Usage	
	DRAM SIMM	Shared DRAM Memory	Primary DRAM Memory
4 MB	4 MB	2 MB	2 MB
8 MB	8 MB	2 MB	6 MB
16 MB	16 MB	2 MB	14 MB

Hardware Product Numbers

The Cisco 2500 series offers the hardware, memory, and NPM cable options listed in the following table. If a product number ends with an equal sign (=), the item can be ordered only as a spare. If a product number does not end with an equal sign, the item can be ordered as a spare or as a configurable part of a system order. Other hardware options can also be ordered through the Cisco authorized reseller channel.

Note For options that apply to most systems, refer to the "Cables," "Transceivers" or "Power Supplies and Power Cords" chapters later in the catalog.

Single LAN Routers

Each Cisco 2501, 2502, 2503, 2504, 2520, 2521, 2522, and 2523 machine contain the common Cisco 2500 series features listed in the following table.

Note This section discusses standard models. The mission-specific models are described in the "Mission-Specific Routers" section later in this chapter.

Table 15-121: Single LAN Router Network Interfaces

Model	Ethernet	Token Ring	Low-Speed Serial ¹	Serial ²	ISDN BRI
Cisco 2501	1	0	0	2	0
Cisco 2502	0	1	0	2	0
Cisco 2503	1	0	0	2	1
Cisco 2504	0	1	0	2	1
Cisco 2520	1	0	2	2	1
Cisco 2521	0	1	2	2	1
Cisco 2522	1	0	8	2	1
Cisco 2523	0	1	8	2	1

1. Synchronous and asynchronous.
2. Synchronous.

Figure 15-87: Cisco 2501 Rear View



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BILLING**

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APR 14 11 28 AM '03

COUNTY OF ERIE
DIV OF INFORMATION
& SUPPORT SERVICES

COUNTY OF ERIE
DISS-ERIE LIB
95 FRANKLIN ST FLR 15
BUFFALO NY 14202

Account Number
716 M56-5977 309
April 4, 2000

Invoice Number
M565977309-00095

Payment Due Date
May 04, 2000

Billing Inquiries Call (315) 890-6757

Total Amount Due
\$7,295.71

BMO OFC NYBI

Please fold and detach here. Return portion below with your payment.
All charges are payable to Bell Atlantic.



Account Number	Payment Due Date	Invoice Number	Total Amount Due
716 M56-5977 309	May 04, 2000	M565977309-00095	\$7,295.71

Amount Enclosed

\$ **7,295.71**

COUNTY OF ERIE
DISS-ERIE LIB
95 FRANKLIN ST FLR 15
BUFFALO NY 14202

**BELL ATLANTIC
P.O. BOX 1100
ALBANY, NY 12250-0001**

**716 M56-5977 309
BMO OFC NYBI**

9235065977309571620000000000000950000000000072957100024019



ACCESS
BILLING

Page 1

Account number
716 M56-5977 309
April 4, 2000

COUNTY OF ERIE
DISS-ERIE LIB
95 FRANKLIN ST FLR 15
BUFFALO NY 14202

BILLING INQUIRIES CALL (315) 890-6757

FOR TELCO USE:
ICSC OFC NYB1

FACILITY ACCESS SERVICES

*** BALANCE DUE INFORMATION ***

TOTAL AMOUNT OF LAST BILL	7,290.56
PAYMENTS APPLIED - SEE DETAIL	7,290.56CR
ADJUSTMENTS APPLIED - SEE DETAIL	.00
NON-JURISDICTIONAL	.00
ZERO BALANCE DUE	.00

*** DETAIL OF CURRENT CHARGES ***

TOTAL - NY - 5130	
LATE PAYMENT CHARGES APPLIED	.00
MONTHLY ACCESS CHARGES	
FROM APR 04 THRU MAY 03	7,076.36
INTERSTATE	7,076.36
OTHER CHARGES AND CREDITS	.00
TAXES	.00
SURCHARGE - SEE DETAIL	219.35
TOTAL CURRENT CHARGES * DUE BY MAY 04, 2000 *	7,295.71

TOTAL AMOUNT DUE 7,295.71



**ACCESS
BILLING**

Page 2

Account number
716 M56-5977 309
April 4, 2000

*** DETAIL OF PAYMENTS APPLIED ***

INVOICE NO. M565977309-00064 NY
MAR 30 2000 PAYMENT APPLIED

7,290.56CR

TOTAL PAYMENTS APPLIED

7,290.56CR



ACCESS
BILLING

Page 3

Account number
716 M56-5977 309
April 4, 2000

*** DETAIL OF ADJUSTMENTS APPLIED ***

INVOICE NO. M565977309-99308NY

ADJ. SERIAL NO. 1002684442	
MAR 15 2000 ADJUSTMENT FOR TRANSFER OF BALANCE	
ON MAR 15 2000	5.18
NON-JURISDICTIONAL NY-5130	-----
TOTAL ADJUSTMENT AMOUNT	5.18

INVOICE NO. M565977309-00004NY

ADJ. SERIAL NO. 1002684443	
MAR 15 2000 ADJUSTMENT FOR TRANSFER OF BALANCE	
ON MAR 15 2000	5.18CR
NON-JURISDICTIONAL NY-5130	-----
TOTAL ADJUSTMENT AMOUNT	5.18CR

INVOICE NO. M565977309-00035NY

ADJ. SERIAL NO. 1002684444	
MAR 15 2000 ADJUSTMENT FOR TRANSFER OF BALANCE	
ON MAR 15 2000	5.15
NON-JURISDICTIONAL NY-5130	-----
TOTAL ADJUSTMENT AMOUNT	5.15

INVOICE NO. M565977309-00064NY

ADJ. SERIAL NO. 1002684445	
MAR 15 2000 ADJUSTMENT FOR TRANSFER OF BALANCE	
ON MAR 15 2000	5.15CR
NON-JURISDICTIONAL NY-5130	-----
TOTAL ADJUSTMENT AMOUNT	5.15CR

TOTAL CREDIT ADJUSTMENTS APPLIED	10.33CR
TOTAL DEBIT ADJUSTMENTS APPLIED	10.33
TOTAL ADJUSTMENTS APPLIED	.00



ACCESS
BILLING

Page 5

Account number
716 M56-5977 309
April 4, 2000

*** DETAIL OF SURCHARGE ***

NEW YORK - 5130

<u>TYPE</u>	<u>MONTHLY ACCESS</u>	<u>USAGE</u>	<u>OTHER</u>	<u>TOTAL</u>
GROSS INC	219.35	.00	.00	219.35
TOTAL	219.35	.00	.00	219.35



**ACCESS
BILLING**

Page 6

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

CIRCUIT IDENTIFICATION	AMOUNT	MPB
NON HIGH CAPACITY		
CLS 40.XHGN.276477..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276478..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276480..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276481..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276482..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276483..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276484..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276485..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276486..NY		



ACCESS
BILLING

Page 7

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

CIRCUIT IDENTIFICATION	AMOUNT	MPB
CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276487..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276488..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276489..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.XHGN.276490..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YBGA.111317..NY CKR UNKNOWN INTERSTATE	925.80	
CLS 40.YGGA.106733..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111076..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111077..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111078..NY		



**ACCESS
BILLING**

Page 8

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

<u>CIRCUIT IDENTIFICATION</u>	<u>AMOUNT</u>	<u>MPB</u>
CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111079..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111080..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111081..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111082..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111083..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111084..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.111085..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121512..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121513..NY		



ACCESS
BILLING

Page 9

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

<u>CIRCUIT IDENTIFICATION</u>	<u>AMOUNT</u>	<u>MPB</u>
CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121514..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121515..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121516..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121517..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121518..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121519..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121520..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121521..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121522..NY		



**ACCESS
BILLING**

Page 10

Account number
716 M56-5977 309
April 4, 2000

*** * * FACILITY ACCESS CIRCUIT LISTING * * ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

CIRCUIT IDENTIFICATION	AMOUNT	MPB
CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121523..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121524..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121525..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121526..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121527..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121528..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121529..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.121530..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122058..NY		



**ACCESS
BILLING**

Page 11

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

<u>CIRCUIT IDENTIFICATION</u>	<u>AMOUNT</u>	<u>MPB</u>
CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122059..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122060..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122061..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122062..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.122063..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.268517..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.280755..NY CKR UNKNOWN INTERSTATE	118.28	
CLS 40.YGGA.280756..NY CKR UNKNOWN INTERSTATE	118.28	
	<u>118.28</u>	



**ACCESS
BILLING**

Page 12

Account number
716 M56-5977 309
April 4, 2000

*** FACILITY ACCESS CIRCUIT LISTING ***

THE FOLLOWING CIRCUITS ARE INCLUDED IN THE MONTHLY ACCESS CHARGES

<u>CIRCUIT IDENTIFICATION</u>	<u>AMOUNT</u>	<u>MPB</u>
INTERSTATE SUBTOTAL	7,076.36	
TOTAL FACILITY CIRCUIT CHARGES	7,076.36	
TOTAL FACILITY CIRCUITS		53